Determination of Public Land (Rangeland) Health for 65036 CARL E COOPER

The Record of Decision (ROD) for the New Mexico Standards for Public Land Health and Guidelines for Livestock Grazing Management (dated January 2001) adopted three Standards for Public Land Health. These are (1) Upland Sites Standard, (2) Biotic Communities, Including Native, Threatened, Endangered, and Special Status Species Standard and (3) Riparian Sites Standard.

The ROD also established a process for the BLM Field Offices for the implementation. Through a public participation process, the Roswell Field Office developed and adopted indicators to use in conjunction with existing monitoring data to assess these Standards.

Field assessment worksheets and other available data which evaluate the local indicators, were completed for this allotment. Based on the assessments, it is my determination that the Public Lands within the Carl E Cooper Allotment #65036 meet the Upland Sites Standard and (2) Biotic Communities, Including Native, Threatened, Endangered, and Special Status Species Standard. There are no Public Land riparian areas on this allotment, therefore this Standard will not addressed.

/s/ T. R. KREAGER	09/22/2003
Assistant Field Manager	Date

Standards of Public Land Health
Evaluation of 65036 CARL E COOPER Allotment
[08/11/2003]

The Roswell Field Office conducted rangeland health assessments at six study sites within the CARL E COOPER Allotment #65036. The assessments looked at the Soil/Site Stability, Hydrologic Function and Biotic Integrity indicators within the vicinity of each study site. Existing monitoring data was incorporated into and in support of the field assessment. The summary of each assessment is attached and shown in the following table.

Study Area or Assessment Area	UPLAND			BIOTIC			RIPARIAN		
	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet
65036-EAST-D088 (*)	X			X			N/A		
65036-FRAZIER GYP SW-D086	X			X			N/A		
65036-FRAZIER LO-SW-D087 (*)	X			X			N/A		
65036-REGISTERED-D085 (*)	X			X			N/A		
65036-RIVER NW #1-D084 (*)	X			X			N/A		
65036-RIVER NW #2-N006 (*)	X			X			N/A		

Twenty-two (22) indicators for Rangeland Health were evaluated for the Carl E Cooper allotment; 10 of these assessed soil/site stability, 11 assessed hydrologic functions and 13 assessed biotic integrity. These qualitative assessments along with quantitative information from long-term monitoring studies on six study areas on the allotment were utilized to assess the rangeland health of the public land within the allotment. These quantitative evaluations were performed by the Roswell Field office staff starting in the early 1980's. These included ground and vegetative cover and composition, production, frequency, and ecological condition as calculated from these collections which have been scheduled approximately every 5 years.

The Carl Cooper allotment lies along U.S. Highway 70 approximately 18 miles east of Roswell. The allotment slopes gradually down towards the Pecos River and has the Bob Crosby draw traversing through three pastures. This draw is important for drainage and for wildlife habitat. Much of the draw is invaded by dense stands of salt cedar, but is still providing cover for wildlife species. A spring exists on private land within the draw which flows on Public Lands.

This allotment has ongoing oil and gas production and drilling, hunting, recreation use, and livestock grazing. The Haystack Mountain Off Highway Vehicle area is located just north of the allotment and the Santa Fe railroad forms the southern boundary.

Grazing deferment is accomplished through rotational grazing through the pastures.

This allotment has been an active oil and gas (primarily gas) field for an exteded period of time. Multiple roads, pipelines drilling pads, and other facilities exist for the gas production. The Railroad on the southern end of the allotment contributes to channelized water flows and has led to accelerated erosion in the Bob Crosby draw area. Two county maintained roads are also located on this allotment that channel water and increase water velocities. These activities have contributed to the overall condition of the land, particularly influencing the water flow patterns and the creation of gullies.

Overall, the allotment is in a stable state. Other than physical disturbaces such as new roads or pipelines, the largest threat is that of invasive plants. The entire area has varying densities of mesquite and the drainages contain dense stands of salt cedar. One old mesquite treatment, in the Northwest Pasture attempted to resdtore the herbaceous component. This treatment area does have a lower density of mesquite, but other invasives such as snakleweed are well established. Mesquite treatments should respond favorably because adequate seed sorces for preferred vegetation exists.

Treating the invasive mesquite would benefit the area by allowing herbaceous species such as preferred grasses to become established. Many of the areas would benefit by increased water infiltration and soil moisture retention due to the increased herbaceous cover.

The area evaluated in NW#2 was heavily influenced by roads and pipelines. Severe gully formation is occuring in old road locations and the site is not able to retain the precipitation very effectively. This site would respond well to reclaiming unused roads, and treating mesquite.

In the professional opinion of the Assessment Team, the public land within the allotment meet the Upland and Biotic Standards. The Riparian Standard does not apply to this area.

The (*) indicates that the assessment had one or more indicator(s) rated moderate/extreme or extreme. These indicators are:

- Water Flow Patterns

- Bare Ground
- Gullies
- Plant Community Composition and Distribution Relative to Infiltration and Runoff
- Functional/Structural Groups
- Invasive Plants

These indicators by themselves are not enough to rate the site as not meeting a standard but may warrant future monitoring.

Recommendations: Mesquite treatment should be considered in the majority of this allotment. Mesquite treatments will have to be coordinated with the private landowner, due to land status patterns and livestock grazing rotations. Adequate rest to allow vegetative recovery will have to be ensured to establish root systems of the responding herbaceous species. The long term use of any treated area should include periodic growing season deferment to allow the favorable vegetation to form and set seed.

The current grazing practices appear to be in concert with vegetative production and precipitation patterns, no changes are recommended. Changes would be necessary if mesquite treatments are planned in the future to ensure treatment area recovery.

Wildllife and TE - Habitat can be improved by reducing the density of mesquite and increasing ground cover. Need to continue monitoring Bob Crosby Draw. Consider joint projects with Bitter Lake National Willdlife Refuge in the event of large scale mesquite or saltcedar control (chemical, mechanical or prescribed fire). Demand the rehabilitation or reconstruction of problem oil and gas roads as they are contuning to degrade habitat through gulleying. Minimize right-of-way disturbances and demand immediate re-seeding efforts.

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65036-EAST-D088			
Legal Land Desc	SWNW 26 0080S 0260E Meridian 23	Acreage	361
Ecosite	042CY003NM LOAMY SAND SD-3	Photo Taken	N
Watershed	13060003220 FILLMORE		
Observers	SCHMIDT/BAGGAO	Observation Date	08/14/2003
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	PaA	Soil Taxon Name	PAJARITO
Texture Class	NM644 LFS	Soil Phase	PAJARITO
Texture Modifier	NM644 LOAMY FINE SAND		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	11.39	NOAA Growing Season Precipitation	7.05
NOAA Avg Annual Precipitation	12.17	NOAA Avg Growing Season Precipitation	9.81
Disturbances and Animal Use:	Grazing use on this allotment includes pasture rotation. There were no livestock present in the pasture when the assesment was completed.		

Part 2. Attributes and Indicators

		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills			X		
Comments:						
S H	Water Flow Patterns		X			
Comments:	More numerous than expected, railroad right of way influences heavily. Each culvert runs into a gully by directing flows. Patterns are interconnected, these sandy soils are susceptible to this type of erosion.					
S H	Pedestals and/or Terracettes			X		

Comments:						
S H	Bare Ground		X			
Comments:	Actual value on the ground is higher than last monitoring data indicates,					
S H	Gullies			X		
Comments:	Inflenced by railroad, headcuts originate at Right of Way culverts.					
S	Wind-scoured, Blowouts, and/or Deposition Areas			X		
Comments:	Decent vegetation present in interspaces of mesquite.					
H	Litter Movement				X	
Comments:						
S H B	Soil Surface Resistance to Erosion				X	
Comments:	Sandy soils, leaning towards moderate.					
S H B	Soil Surface Loss or Degradation			X		
Comments:	interspaces show soil losses, mesquite dunes indicate soil movement.					
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff			X		
Comments:	Mesquite invasion, less herbaceous vegetation. Water movement (runoff) patterns.					
S H B	Compaction Layer					X
Comments:	Sandt soils.					
B	Functional/Structural Groups			X		
Comments:	Decent mix of grasses present. The range site calls for Bluestem and shinnery oak, we strongly disagree.					
B	Plant Mortality/Decadence			X		
Comments:	Drought influenced.					
H B	Litter Amount				X	
Comments:						
B	Annual Production				X	
Comments:	Drought influenced.					
B	Invasive Plants		X			
Comments:	High densities of mesquite.					
B	Reproductive Capability of Perennial Plants				X	

Comments:						
S	Physical/Chemical/Biological Crusts			X		
Comments:	Lack of crusts in interspaces (physical).					
B	Wildlife Habitat			X		
Comments:	This area is somewhat of an ecotone between grasslands and Chihuahuan desert mixed shrub grasslands. It has been affected by the Atchison Topeka and Santa Fe Railroad right-of-way and past high livestock grazing use. The habitat is now a shrubland type with mesquite dominating most of the area.					
B	Wildlife Populations				X	
Comments:	No specific wildlife population information. Species of concern include mule deer and upland game birds. A shift toward wildlife species that prefer a more shrubby component has occurred.					
B	Special Status Species Habitat					X
Comments:	None known to occur.					
B	Special Status Species Populations					X
Comments:	None known to occur.					

Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	2	6	1	1
H	Hydrologic	0	2	5	3	1
B	Biotic	0	1	4	5	3

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil	This site will meet the standards, many of the items checked that are moderate or moderate to extreme were leaning to the moderate side. Many of the marginal calls were a result of the changes that have occured due to the railroad right-of-way. The water flows have been channelized which increases water velocity and causes erosion. Bare ground amounts are higher than expected and the area shows evidence of past soil loss. An explanation for the change in vegetation cover is explained by the increased density of mesquite. The mesquite is crowding other vegetation and utilizing soil moisture which prohibits herbaceous vegetative growth.	2	6	2
Hydrologic	Please see rational for the uplands, all comments apply to the hydrologic functions as well.	2	5	4
Biotic		1	4	8

Site Notes: Good candidate for mesquite control, adequate herbaceous species present for seed and tillering sorce.

The Railroad definitely impacts this area by channelizing water.

The Ecological Range Site (ESD) description, Loamy Sand SD-3, associated with this site is in error. The ESD vegetation calls for plant species that do not occur in the area. Placing this site to a Sandy SD-3 would more accurately describe this site.

Wildlife and TE - A small blacktailed prairie dog colony was found in the southwest corner of the pasture on private land, on a different soil type.

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65036-FRAZIER GYP SW-D086			
Legal Land Desc	NENE 29 0080S 0260E Meridian 23	Acreage	0
Ecosite	070BY066NM GYP UPLAND CP-2	Photo Taken	N
Watershed	13060003220 FILLMORE		
Observers	SCHMIDT/BAGGAO	Observation Date	07/14/2003
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	HMA	Soil Taxon Name	HOLLOMEX
Texture Class	NM644 L	Soil Phase	HOLLOMEX-REEVES-MILNER
Texture Modifier	NM644 LOAM,DRY		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	11.39	NOAA Growing Season Precipitation	7.05
NOAA Avg Annual Precipitation	12.17	NOAA Avg Growing Season Precipitation	9.81
Disturbances and Animal Use:	Livestock currently within the pasture. Oil and gas facilities are present and this area seems to be active for further O&G activity. Vegetation is in good condition considering the drought conditions.		

Part 2. Attributes and Indicators

		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:						

S H	Water Flow Patterns				X	
Comments:						
S H	Pedestals and/or Terracettes			X		
Comments:	common in areas, wind, water flows.					
S H	Bare Ground				X	
Comments:						
S H	Gullies			X		
Comments:	Inflenced by roads, draining to Bob Crosby draw.					
S	Wind-scoured, Blowouts, and/or Deposition Areas				X	
Comments:	Soil Movement due to wind, this is expected in the gyp sites.					
H	Litter Movement					X
Comments:	common litter, appears to stay in place.					
S H B	Soil Surface Resistance to Erosion				X	
Comments:						
S H B	Soil Surface Loss or Degradation					X
Comments:						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff					X
Comments:	Vegetation is healthy and abundant. Some opuntia and snakeweed, but is in balance.					
S H B	Compaction Layer					X
Comments:	Some roads, trails, and oil and gas facilities. Overall little evidence.					
B	Functional/Structural Groups					X
Comments:	See notes from Community composition and distribution.					
B	Plant Mortality/Decadence				X	
Comments:	Some evidence of mortality to drought, but only slightly elevated.					
H B	Litter Amount					X
Comments:	Litter exceed expectations.					
B	Annual Production				X	
Comments:	Area must have recieved rains last growing season, shows better than 01 monitoring.					
B	Invasive Plants				X	

Comments:	Snakeweed in disturbed areas.					
B	Reproductive Capability of Perennial Plants					X
Comments:						
S	Physical/Chemical/Biological Crusts					X
Comments:						
B	Wildlife Habitat					X
Comments:	This pasture is a diverse assemblage of gypgrassland habitat with loamy inclusions and gravelly hills. The pasture is in relatively good condition other than the ubiquitous mesquite on the more loamy sites in the pasture, mostly to the east. The upper watershed of Bob Crosby Draw is in this pasture and forms a definite drainage in the southwest border of the pasture. It has pockets of saltcedar but no known open water locations.					
B	Wildlife Populations					X
Comments:	No specific wildlife population information at this time. Species of concern include pronghorn antelope, mule deer and upland game birds. Non game terrestiral wildlife species may utilize the draw corridor as well.					
B	Special Status Species Habitat					X
Comments:	None known to occur.					
B	Special Status Species Populations					X
Comments:	None known to occur.					

Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	2	4	4
H	Hydrologic	0	0	2	3	6
B	Biotic	0	0	0	4	9

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need*

More Info, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil		0	2	8
Hydrologic		0	2	9
Biotic		0	0	13

Site Notes: Gyp site exceeds expectations, good vegetation, litter components.

This assesment area and study site is located within a complex of gyp and loamy soils. The two are intermingled and difficult to isolate for evaluation purposes. Two assesments were completed for this area, one for gyp, and one for loamy. The gyp assesment was completed at the long term monitoring plot.

Wildlife and TE - the potential for blacktailed prairie dog colonies exist. Oil and gas activity may be increasing in the future, futher impacting relatively undisturbed wildlife habitat.

This pasture is all private land.

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65036-FRAZIER LO-SW-D087			
Legal Land Desc	NENE 29 0080S 0260E Meridian 23	Acreage	0
Ecosite	042CY007NM LOAMY SD-3	Photo Taken	N
Watershed	13060003220 FILLMORE		
Observers	SCHMIDT/BAGGAO	Observation Date	07/14/2003
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	HMA	Soil Taxon Name	HOLLOMEX
Texture Class	NM644 L	Soil Phase	HOLLOMEX-REEVES-MILNER
Texture Modifier	NM644 LOAM,DRY		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	11.39	NOAA Growing Season Precipitation	7.05
NOAA Avg Annual Precipitation	12.17	NOAA Avg Growing Season Precipitation	9.81
Disturbances and Animal Use:	Livestock were present in the pasture when the assesment was completed. Oil and gas pipelines and roads are found in the area. Wildlife - excessive clearing of rights-of-way for oil and gas pipelines occurring in area.		

Part 2. Attributes and Indicators						
		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X

Comments:						
S H	Water Flow Patterns				X	
Comments:						
S H	Pedestals and/or Terracettes			X		
Comments:						
S H	Bare Ground				X	
Comments:	As called for in the Range site description					
S H	Gullies				X	
Comments:						
S	Wind-scoured, Blowouts, and/or Deposition Areas					X
Comments:						
H	Litter Movement				X	
Comments:	wind/water moving fine litter					
S H B	Soil Surface Resistance to Erosion				X	
Comments:						
S H B	Soil Surface Loss or Degradation				X	
Comments:	Shows past soil loss					
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff			X		
Comments:	mesquite, burrograss and snakeweed elevated, otherwise has decent vegetative cover					
S H B	Compaction Layer					X
Comments:	A few trails and roads present in area.					
B	Functional/Structural Groups			X		
Comments:	Some grass species missing, burrograss and mesquite increased.					
B	Plant Mortality/Decadence				X	
Comments:	Black grama is suffering due to drought.					
H B	Litter Amount				X	
Comments:	This is based on 01 monitoring, current visual appears to be less litter.					
B	Annual Production			X		
Comments:	Monitoring site on transitional area, not truly representative of site.					
B	Invasive Plants		X			

Comments:	Mesquite invading and decreasing herbaceous species.					
B	Reproductive Capability of Perennial Plants				X	
Comments:	due to invasive plants.					
S	Physical/Chemical/Biological Crusts				X	
Comments:						
B	Wildlife Habitat			X		
Comments:	A grassland habitat type influenced by Chihuahuan desert ecotone. This is a realtively small inclusion but a potentially productive site impacted by heavy mesquite invasion.					
B	Wildlife Populations			X		
Comments:	No specific wildlife population information. Species of concern include pronghorn antelope, mule deer and upland game birds. Habitat provides for a variety of terrestrial nongame species.					
B	Special Status Species Habitat					X
Comments:	None known to occur.					
B	Special Status Species Populations					X
Comments:	None known to occur.					

Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	1	6	3
H	Hydrologic	0	0	2	7	2
B	Biotic	0	1	4	5	3

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the

ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil		0	1	9
Hydrologic		0	2	9
Biotic		1	4	8

Site Notes: This area is welll suited for a mesquite control project. The interspaces between mesquite are healed over with good vegetative cover.

Some oil and gas roads and pipelines in the area, with expectations of increased activity.

This assesment is part of the frazier pasture which is a complex of gyp and loamy soils. This site was assessed approximately 1/2 mile east of the long tem monitoring plot. the area is primarily loam and better represented the loamy component of the pasture.

This pasture is all private land.

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65036-REGISTERED-D085			
Legal Land Desc	NWSE 15 0080S 0260E Meridian 23	Acreage	639
Ecosite	042CY003NM LOAMY SAND SD-3	Photo Taken	N
Watershed	13060003220 FILLMORE		
Observers	SCHMIDT/BAGGAO	Observation Date	08/15/2003
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	PaA	Soil Taxon Name	PAJARITO
Texture Class	NM644 LFS	Soil Phase	PAJARITO
Texture Modifier	NM644 LOAMY FINE SAND		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	11.39	NOAA Growing Season Precipitation	7.05
NOAA Avg Annual Precipitation	12.17	NOAA Avg Growing Season Precipitation	9.81
Disturbances and Animal Use:	Area shows the influence of drought. While aristida was the dominant grass, other species were present. Active oil and gas field. roads, pipelines and pads are present.		

Part 2. Attributes and Indicators

		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:						
S H	Water Flow Patterns					X
Comments:	Sandy					
S H	Pedestals and/or Terracettes			X		
Comments:						
S H	Bare Ground		X			

Comments:	exceeds upper end of ecological range site description. However, observers have serious reservations about the range site description.					
S H	Gullies				X	
Comments:						
S	Wind-scoured, Blowouts, and/or Deposition Areas			X		
Comments:						
H	Litter Movement			X		
Comments:	Litter is more prevalent around mesquite and larger plants.					
S H B	Soil Surface Resistance to Erosion			X		
Comments:						
S H B	Soil Surface Loss or Degradation			X		
Comments:	Overall plant canopy reduced, bare ground influences soil loss.					
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff			X		
Comments:	Mesquite influenced.					
S H B	Compaction Layer				X	
Comments:	Sandy site, some trailing, oil and gas roads& pipelines.					
B	Functional/Structural Groups		X			
Comments:	Mesquite and three awns dominate. Grama's and others in lower densities. This judgement should lean towards moderate.					
B	Plant Mortality/Decadence					X
Comments:	All plants are alive, no real signs of dead or dying plants.					
H B	Litter Amount			X		
Comments:	Bottom end of expected range from ecological range site description.					
B	Annual Production			X		
Comments:	Primary grass is three-awn.					
B	Invasive Plants		X			
Comments:	Mesquite and three awn in high abundance.					
B	Reproductive Capability of Perennial Plants				X	
Comments:	soil capping and lack of organic matter may lower seed germination capability					

S	Physical/Chemical/Biological Crusts				X	
Comments:	Physical crust, soil capping.					
B	Wildlife Habitat				X	
Comments:	A hilly mixed desert shrub type with potentially grassy swales and drainages. Gravelly hill inclusions. Increasing oil and gas wells and rights-of-way degrading what was just recently undistrubed wildlife habitat.					
B	Wildlife Populations				X	
Comments:	No specific wildlife population information. Species of concern include mule deer and upland game birds. The diverse niches provide for a variety of terrestrial nongame wildlife species. Increasing disturbances in the area (oil and gas, and improved access) may impact habitat and wildlife populations in area.					
B	Special Status Species Habitat					X
Comments:	None known to occur.					
B	Special Status Species Populations					X
Comments:	None known to occur.					

Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	1	4	3	2
H	Hydrologic	0	1	6	2	2
B	Biotic	0	2	4	4	3

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil	Several of the upland and Biotic indicators are in the moderate range. These calls were generated around the fact that mesquite densities have increased and the prevalant herbaceous species is three-awn.	1	4	5
Hydrologic		1	6	4
Biotic		2	4	7

Site Notes: Mesquite is dominant, and is well suited to treatment. Three awn is the most prevalent grass, however other species do occur.

Influence of drought is also evident in the area.

This site is a good candidate for brush control, adequate seed source available for favorable recovery.

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65036-RIVER NW #1-D084			
Legal Land Desc	SESE 18 0080S 0260E Meridian 23	Acreage	1048
Ecosite	042CY004NM SANDY SD-3	Photo Taken	N
Watershed	13060003220 FILLMORE		
Observers	SCHMIDT/BAGGAO	Observation Date	08/14/2003
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	PBB	Soil Taxon Name	PAJARITO
Texture Class	NM644 FSL	Soil Phase	PAJARITO-BLUEPOINT
Texture Modifier	NM644 FINE SANDY LOAM,HU		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	11.39	NOAA Growing Season Precipitation	7.05
NOAA Avg Annual Precipitation	12.17	NOAA Avg Growing Season Precipitation	9.81
Disturbances and Animal Use:	This area was treated for mesquite 20 plus years ago. No livestock were observed during the assessment. Active oil and gas field, roads, pipelines and pads present. Wildlife - Habitat and wildlife species disturbance and harrassment is moderate due to the proximity of the area to Roswell and the ease of access throughout the pasture. Major pipeline and power line rights-of-way are found in the area. Aztec Road, and several oil and gas roads, have created some impact to the lands through storm runoff collecting on and above the road and channeling flows that create gullies.		

Part 2. Attributes and Indicators						
		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate	Moderate	Slight to	None

			to Extreme		Moderate	to Slight
S H	Rills					X
Comments:						
S H	Water Flow Patterns				X	
Comments:						
S H	Pedestals and/or Terracettes			X		
Comments:						
S H	Bare Ground				X	
Comments:						
S H	Gullies		X			
Comments:	Roads, pipelines and drill pads heavily influence area by channelizing water.					
S	Wind-scoured, Blowouts, and/or Deposition Areas				X	
Comments:	Some mesquite hummocking, very little active blowout.					
H	Litter Movement					X
Comments:	Staying in place.					
S H B	Soil Surface Resistance to Erosion					X
Comments:	Sandy					
S H B	Soil Surface Loss or Degradation				X	
Comments:	Shows past degredation, currently stable.					
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff				X	
Comments:	Mesquite prevelant where not treated.					
S H B	Compaction Layer					X
Comments:	Compaction around roads, pads, pipelines and trails.					
B	Functional/Structural Groups				X	
Comments:	Snakeweed in high densities.					
B	Plant Mortality/Decadence					X
Comments:	Black grama mortality inflenced by drought.					
H B	Litter Amount					X
Comments:						

B	Annual Production				X	
Comments:	Drought influenced.					
B	Invasive Plants			X		
Comments:	snakeweed and some mesquite.					
B	Reproductive Capability of Perennial Plants				X	
Comments:						
S	Physical/Chemical/Biological Crusts				X	
Comments:						
B	Wildlife Habitat				X	
Comments:	A grassland habitat type with mesquite invasion. This pasture was treated many years ago. the landform gently slopes west toward the Pecos River and includes the breaks and drainages. Also includes Bob Crosby Draw with its riparian habitat and a spring. The draw is relativeluy inaccessible to livestock because of the steep walls, but livestock do occassionally find there way into the draw.					
B	Wildlife Populations				X	
Comments:	No specific wildlife population information. Species of concern include mule deer and a variety on nongame terrestrial wildlife species. Surveys of invertebrates and fish have been conducted in Bob Crosby spring.					
B	Special Status Species Habitat					X
Comments:	None known to occur. Potential habitat for the Pecos sunflower exists in Bob Crosby Draw.					
B	Special Status Species Populations					X
Comments:	None known to occur.					

Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	1	1	5	3
H	Hydrologic	0	1	1	4	5

B	Biotic	0	0	1	6	6

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil	Of concern at this site is soil erosion caused by existing roads. The area was treated for mesquite in the early 1980's but the mesquite has become established again.	1	1	8
Hydrologic		1	1	9
Biotic		0	1	12

Site Notes: This area is within an old mesquite treatment.

Snakeweed is common in the area, black grama mortality high due to drought.

Wildlife - Bob Crosby Spring is located in Northwest Pasture. This draw and associated riparian habitat was not evaluated during the field visit and is not included in this assessment. The spring was surveyed for aquatic invertebrates by the NMNHP in the year 2000 through a BLM cooperative agreement. The water quality was described as organically enriched. No evidence of livestock were found at the spring during the survey. No Pecos sunflower were observed although the spring is potential habitat for this threatened species. The drainage west of the spring on public land is dominated by dense saltcedar. Many invertebrates were observed using the pool.

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65036-RIVER NW #2-N006			
Legal Land Desc	NENE 24 0080S 0250E Meridian 23	Acreage	1047
Ecosite	042CY004NM SANDY SD-3	Photo Taken	N
Watershed	13060003220 FILLMORE		
Observers	SCHMIDT/BAGGAO	Observation Date	08/15/2003
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	PBB	Soil Taxon Name	PAJARITO
Texture Class	NM644 FSL	Soil Phase	PAJARITO-BLUEPOINT
Texture Modifier	NM644 FINE SANDY LOAM,HU		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	11.39	NOAA Growing Season Precipitation	7.05
NOAA Avg Annual Precipitation	12.17	NOAA Avg Growing Season Precipitation	9.81
Disturbances and Animal Use:	Oil and gas roads/pipelines common in area. Roads that were built without water turnouts or a crowned surface are eroding badly. Large gullies are present where roads have completely washed out. No livestock observed in pasture during the assessment.		

Part 2. Attributes and Indicators

		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills			X		

Comments:	Slope and disturbances from roads and pipelines influence development of rills.					
S H	Water Flow Patterns			X		
Comments:	Influenced by conditions up slope.					
S H	Pedestals and/or Terracettes			X		
Comments:	Towards extreme, very common.					
S H	Bare Ground			X		
Comments:	Based on 01 monitoring.					
S H	Gullies		X			
Comments:	Heavily influenced by oil and gas roads and pads.					
S	Wind-scoured, Blowouts, and/or Deposition Areas				X	
Comments:						
H	Litter Movement			X		
Comments:						
S H B	Soil Surface Resistance to Erosion			X		
Comments:	Plant interspaces vulnerable.					
S H B	Soil Surface Loss or Degradation			X		
Comments:						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff		X			
Comments:	Towards the moderate classification.					
S H B	Compaction Layer					X
Comments:	Trails and roads.					
B	Functional/Structural Groups			X		
Comments:	Mesquite and snakeweed dominant, three awn common. missing the grama component.					
B	Plant Mortality/Decadence				X	
Comments:	Drought influenced.					
H B	Litter Amount				X	
Comments:						
B	Annual Production			X		
Comments:	Drought influenced, also species shift to shrubs.					

B	Invasive Plants		X			
Comments:	Mesquite and snakeweed common.					
B	Reproductive Capability of Perennial Plants				X	
Comments:	Sheet flow will move seed, lowering germination possibility.					
S	Physical/Chemical/Biological Crusts					X
Comments:	Sandy site, silt capping common.					
B	Wildlife Habitat				X	
Comments:	Generally on the breaks above the Pecos River floodplain. Habitat is more sandy and subejct to erosion. The area appears to support a mixture of grassland and shrubland type and not necessarily one or the other as with more upland sites. Habitat generally being degraded by oil and gas activity.					
B	Wildlife Populations				X	
Comments:	No specific wildlife population information. Species of concern include mule deer and upland game birds, a variety of nongame terrestrial wildlife species will also occur due to the landform and vegetative diversity. Some shift toward more of a shrubby habitat type due to mesquite invasion.					
B	Special Status Species Habitat					X
Comments:	None known to occur. See notes for River NW #1.					
B	Special Status Species Populations					X
Comments:	None known to occur. See notes for River NW #1.					

Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	1	6	1	2
H	Hydrologic	0	2	7	1	1
B	Biotic	0	1	4	5	3

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need*

More Info, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

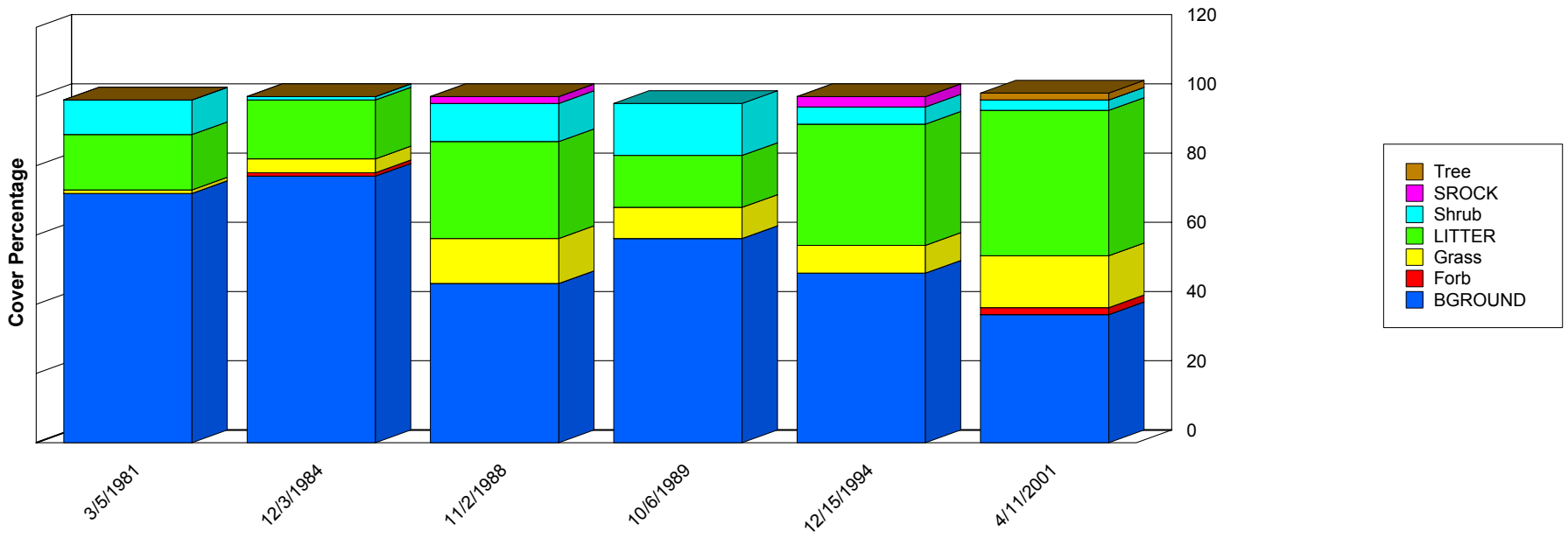
Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil	Thew uplands and biotic indicators show the problem areas as relating to soil erosion, ground cover and invasive species. This area is heavily influenced by roads, pipelines and drill pads. Many of the erosion probelems can be related to poor initial road construction techniques and a lack of maintanence. Invasive plants such as mesquite and snakeweed have become dominant which influences hydrologic functions and inhibit herbaceous vegetative growth.	1	6	3
Hydrologic		2	7	2
Biotic		1	4	8

Site Notes: Recent rain prior to evaluation showed hydrologic functions well.

This area is definitely influenced by oil and gas roads. Observed large gullies driving into the monitoring site.

Good candidate for mesquite control. Adequate herbaceous species for seed and fair amounts of four-wing salt bush.

Ground Cover Trends



	3/5/1981	12/3/1984	11/2/1988	10/6/1989	12/15/1994	4/11/2001
BGROUND	72.00	77.00	46.00	59.00	49.00	37.00
Forb	0.00	1.00	0.00	0.00	0.00	2.00
Grass	1.00	4.00	13.00	9.00	8.00	15.00
LITTER	16.00	17.00	28.00	15.00	35.00	42.00
Shrub	10.00	1.00	11.00	15.00	5.00	3.00
SROCK	0.00	0.00	2.00	0.00	3.00	0.00
Tree	0.00	0.00	0.00	0.00	0.00	2.00
Total	99.00	100.00	100.00	98.00	100.00	101.00

Report Parameters

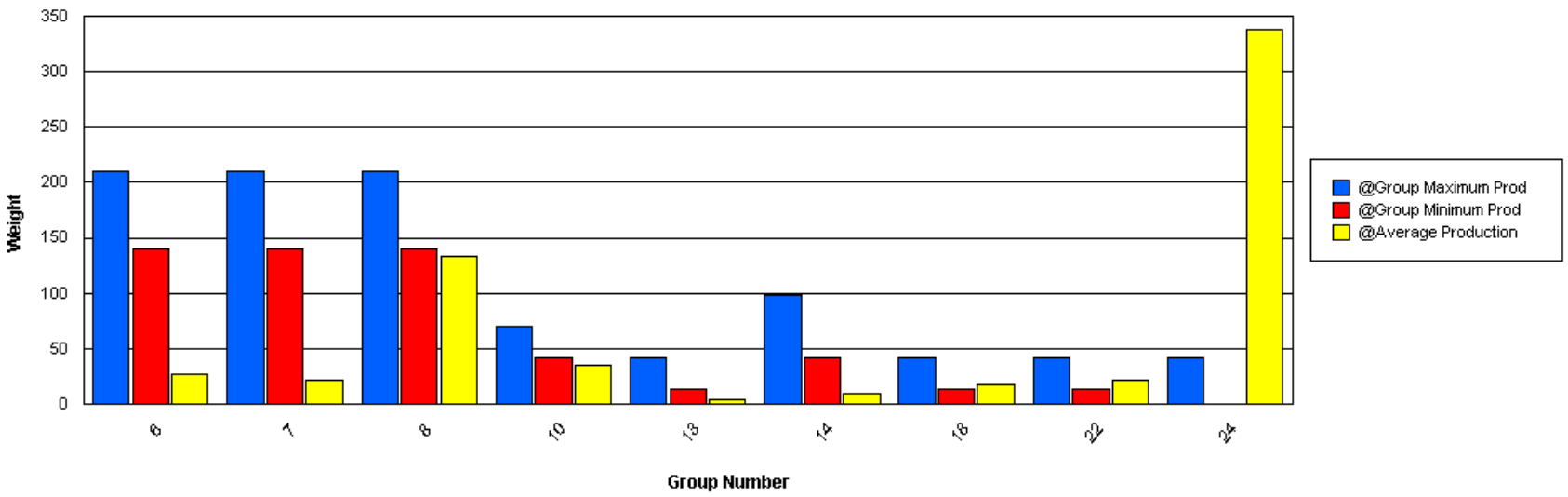
SITE NAME LIKE	65036-EAST-D088
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2001

Functional / Structural Groups

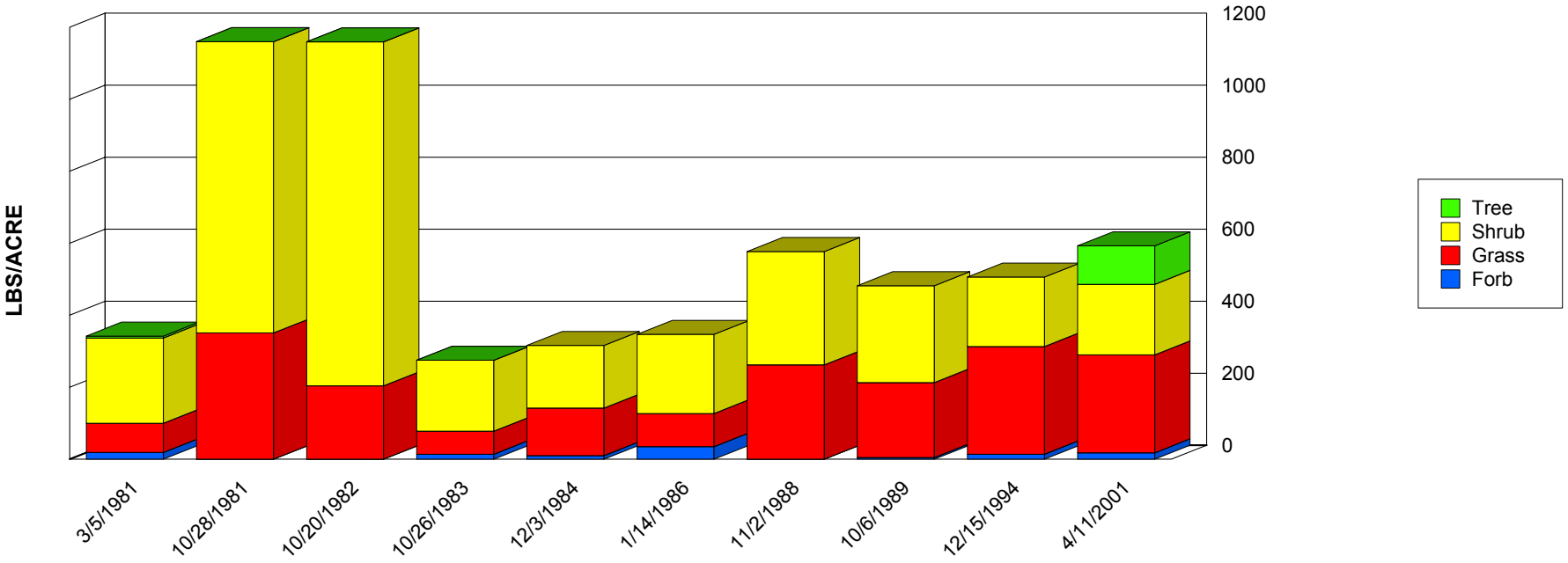
Report Parameters	
SITE NAME LIKE	65036-EAST-D088
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2002
MIN LBS TO GRAPH	3
SELECTED ECOSITE	042CY003NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
6	Grass	MUPO2	140	210	0.00	65.00	26.80	20.51
7	Grass	SEMA5	140	210	0.00	58.00	21.90	18.69
8	Grass	SPCO4	140	210	0.00	84.00	22.50	29.38
8	Grass	SPCR	140	210	0.00	160.00	65.63	45.32
8	Grass	SPFL2	140	210	0.00	169.00	45.56	58.37
10	Grass	ARIST	42	70	0.00	107.00	35.60	34.48
12	Grass	AAGG	70	140	0.00	3.00	0.60	1.20
12	Grass	BOBA2	70	140	0.00	3.00	1.00	1.41
13	Grass	ERPU8	14	42	0.00	16.00	4.22	4.87
14	Forb	CROTO	42	98	0.00	30.00	8.11	9.83
14	Forb	CRPO5	42	98	0.00	14.00	2.00	4.58
14	Forb	MELE2	42	98	0.00	1.00	0.14	0.35
16	Forb	AAFF	42	98	0.00	9.00	1.90	3.14
16	Forb	SENEC	42	98	0.00	4.00	0.57	1.40
17	Forb	LEMO2	14	42	0.00	1.00	0.13	0.33
18	Shrub	ATCA2	14	42	0.00	112.00	17.20	32.21
22	Tree	YUEL	14	42	0.00	107.00	22.40	42.34
24	Shrub	GUSA2	0	42	0.00	510.00	163.70	162.08
24	Shrub	PRGL2	0	42	0.00	449.00	173.80	126.82

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV



Production Lbs/Acre Trends

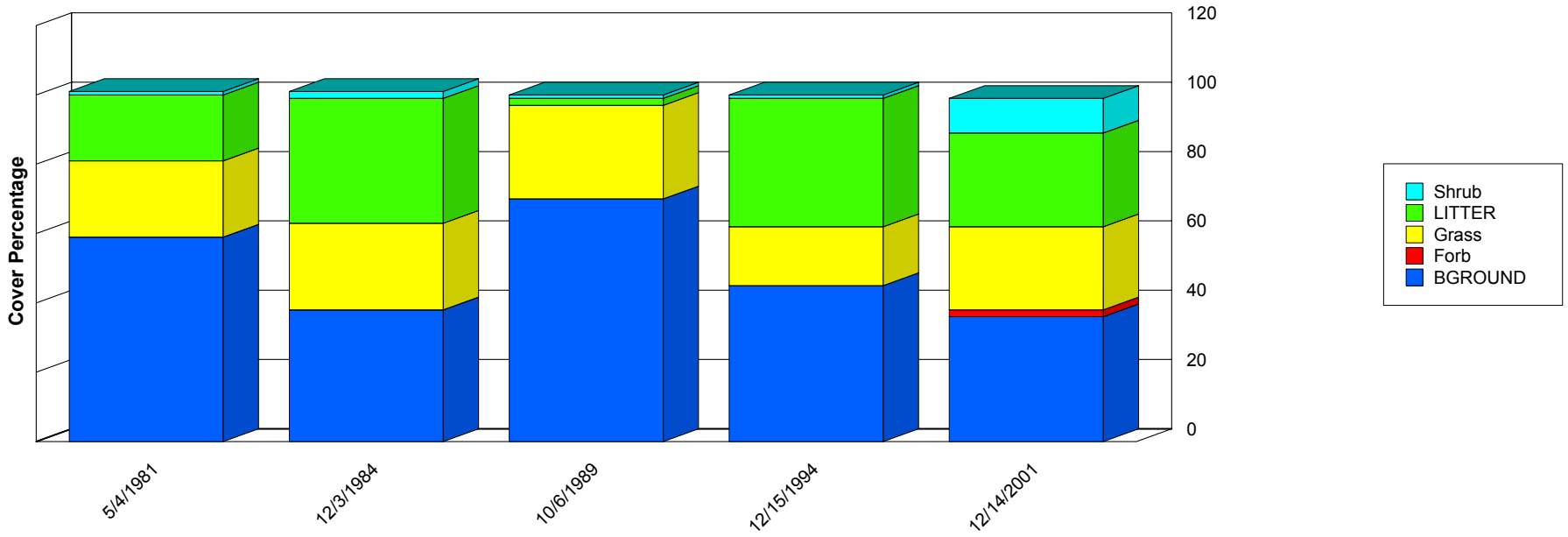


	3/5/1981	10/28/1981	10/20/1982	10/26/1983	12/3/1984	1/14/1986	11/2/1988	10/6/1989	12/15/1994	4/11/2001
Forb	**19.00**	**0.00**	**0.00**	**14.00**	**10.00**	**35.00**	**0.00**	**5.00**	**14.00**	**18.00**
Grass	**81.00**	**351.00**	**204.00**	**64.00**	**132.00**	**92.00**	**262.00**	**208.00**	**299.00**	**272.00**
Shrub	**237.00**	**809.00**	**955.00**	**197.00**	**174.00**	**220.00**	**315.00**	**269.00**	**193.00**	**196.00**
Tree	**5.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**107.00**
Total	**342.00**	**1,160.00**	**1,159.00**	**275.00**	**316.00**	**347.00**	**577.00**	**482.00**	**506.00**	**593.00**

Report Parameters

SITE NAME LIKE	65036-EAST-D088
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2001

Ground Cover Trends



	5/4/1981	12/3/1984	10/6/1989	12/15/1994	12/14/2001
BGROUND	59.00	38.00	70.00	45.00	36.00
Forb	0.00	0.00	0.00	0.00	2.00
Grass	22.00	25.00	27.00	17.00	24.00
LITTER	19.00	36.00	2.00	37.00	27.00
Shrub	1.00	2.00	1.00	1.00	10.00
Total	101.00	101.00	100.00	100.00	99.00

Report Parameters

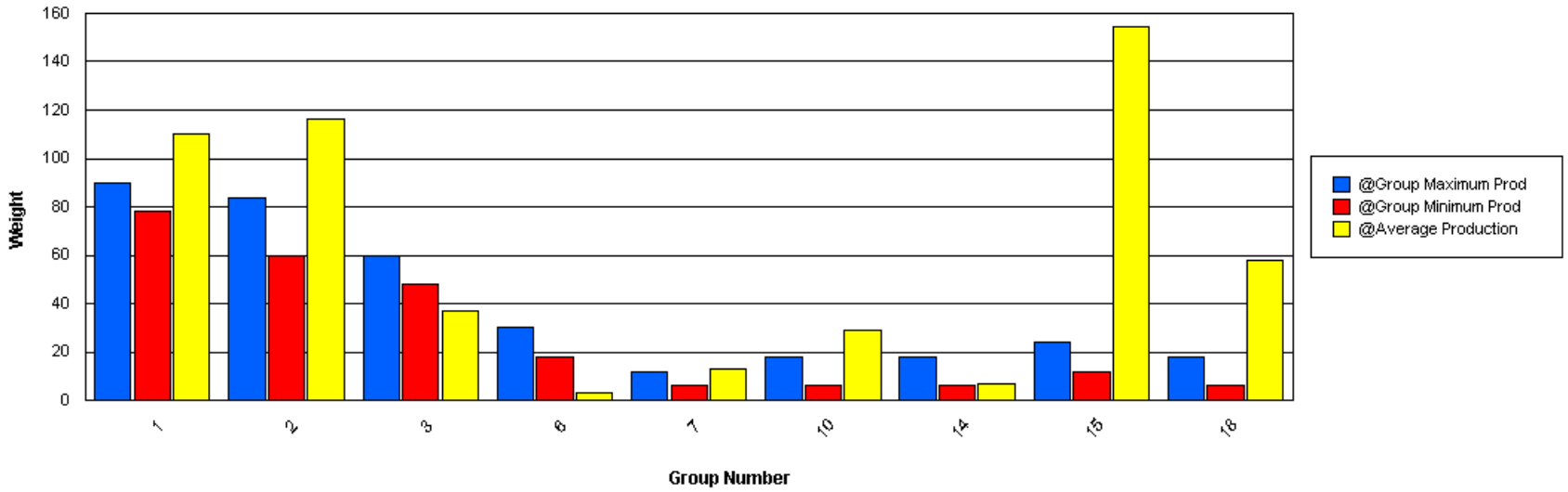
SITE NAME LIKE	65036-FRAZIER GYP SW-D086
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2002

Functional / Structural Groups

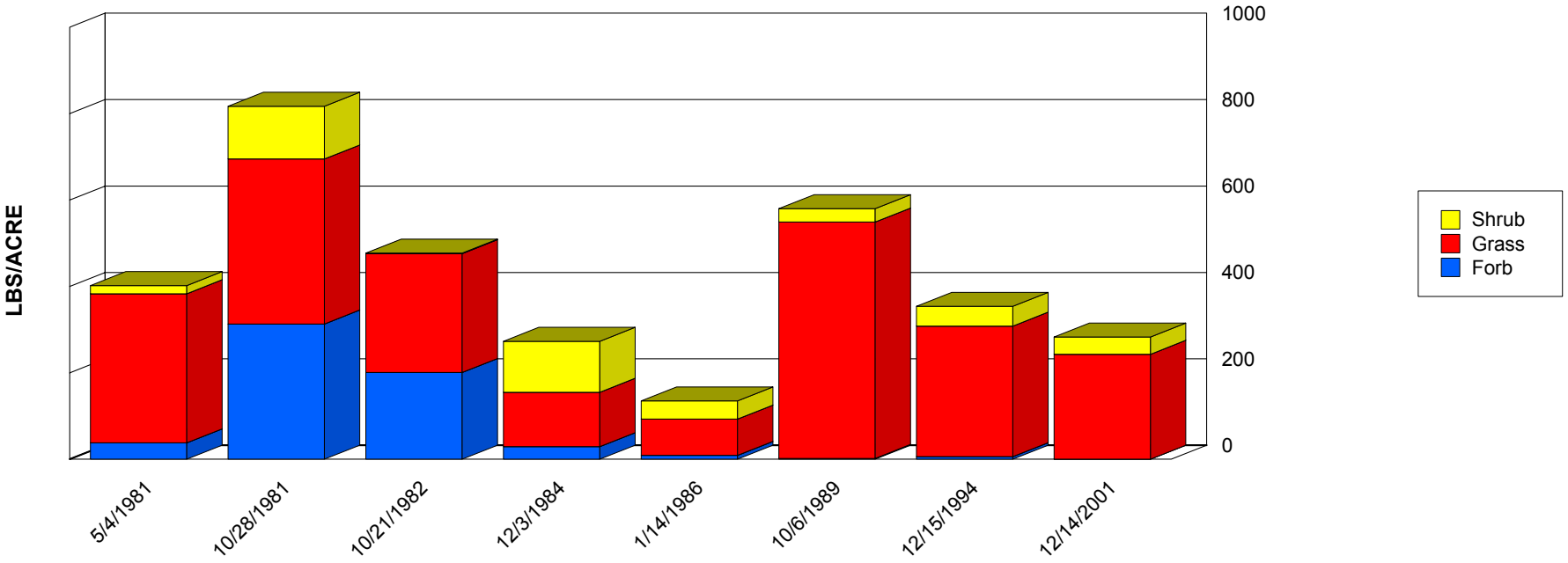
Report Parameters	
SITE NAME LIKE	65036-FRAZIER GYP SW-D086
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2002
MIN LBS TO GRAPH	3
SELECTED ECOSITE	070BY066NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
1	Grass	BOBR	78	90	17.00	199.00	90.88	62.44
1	Grass	BOER4	78	90	0.00	69.00	19.43	22.76
2	Grass	BOGR2	60	84	10.00	68.00	34.00	18.77
2	Grass	SPNE	60	84	0.00	184.00	82.00	70.82
3	Grass	HIMU2	48	60	0.00	108.00	37.00	38.72
6	Grass	ARIST	18	30	0.00	9.00	3.00	4.24
7	Grass	ERPU8	6	12	0.00	26.00	8.43	10.55
7	Grass	SPCR	6	12	0.00	14.00	4.33	4.78
10	Grass	MUAR	6	18	0.00	65.00	10.86	22.18
10	Grass	SCBR2	6	18	0.00	28.00	9.33	10.29
10	Grass	STNE2	6	18	0.00	34.00	6.80	13.60
10	Grass	TRMU	6	18	0.00	2.00	0.33	0.75
10	Grass	TRPI2	6	18	0.00	5.00	1.80	2.23
14	Forb	LEMO2	6	18	0.00	21.00	6.75	8.58
15	Forb	AAFF	12	24	0.00	32.00	6.50	11.49
15	Forb	PECTI	12	24	0.00	179.00	89.50	89.50
15	Forb	PEPA2	12	24	0.00	313.00	58.50	114.28
18	Shrub	GUSA2	6	18	1.00	122.00	48.13	42.88
18	Shrub	OPUNT	6	18	2.00	18.00	10.00	8.00

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV



Production Lbs/Acre Trends

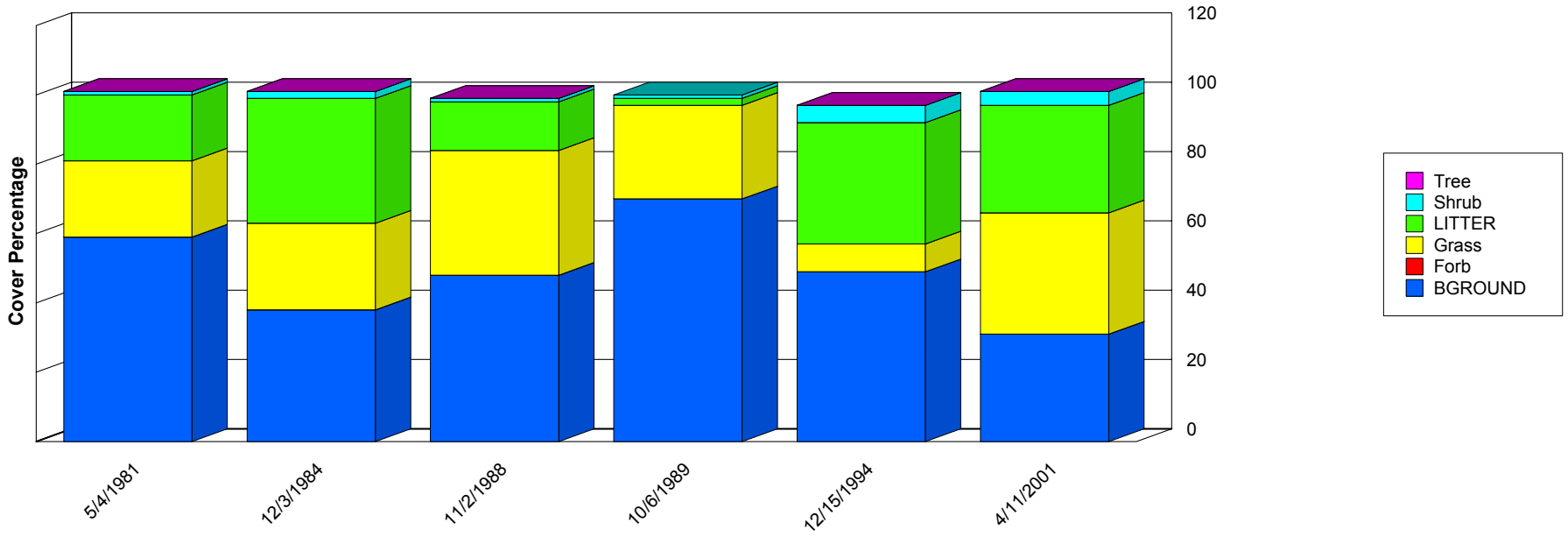


	5/4/1981	10/28/1981	10/21/1982	12/3/1984	1/14/1986	10/6/1989	12/15/1994	12/14/2001
Forb	**38.00**	**313.00**	**201.00**	**29.00**	**9.00**	**2.00**	**6.00**	**0.00**
Grass	**345.00**	**382.00**	**275.00**	**126.00**	**84.00**	**547.00**	**302.00**	**243.00**
Shrub	**19.00**	**122.00**	**1.00**	**118.00**	**42.00**	**31.00**	**46.00**	**40.00**
Total	**402.00**	**817.00**	**477.00**	**273.00**	**135.00**	**580.00**	**354.00**	**283.00**

Report Parameters

SITE NAME LIKE	65036-FRAZIER GYP SW-D086
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2002

Ground Cover Trends



	5/4/1981	12/3/1984	11/2/1988	10/6/1989	12/15/1994	4/11/2001
BGROUND	59.00	38.00	48.00	70.00	49.00	31.00
Forb	0.00	0.00	0.00	0.00	0.00	0.00
Grass	22.00	25.00	36.00	27.00	8.00	35.00
LITTER	19.00	36.00	14.00	2.00	35.00	31.00
Shrub	1.00	2.00	1.00	1.00	5.00	4.00
Tree	0.00	0.00	0.00	0.00	0.00	0.00
Total	101.00	101.00	99.00	100.00	97.00	101.00

Report Parameters

SITE NAME LIKE	65036-FRAZIER LO-SW-D087
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2002

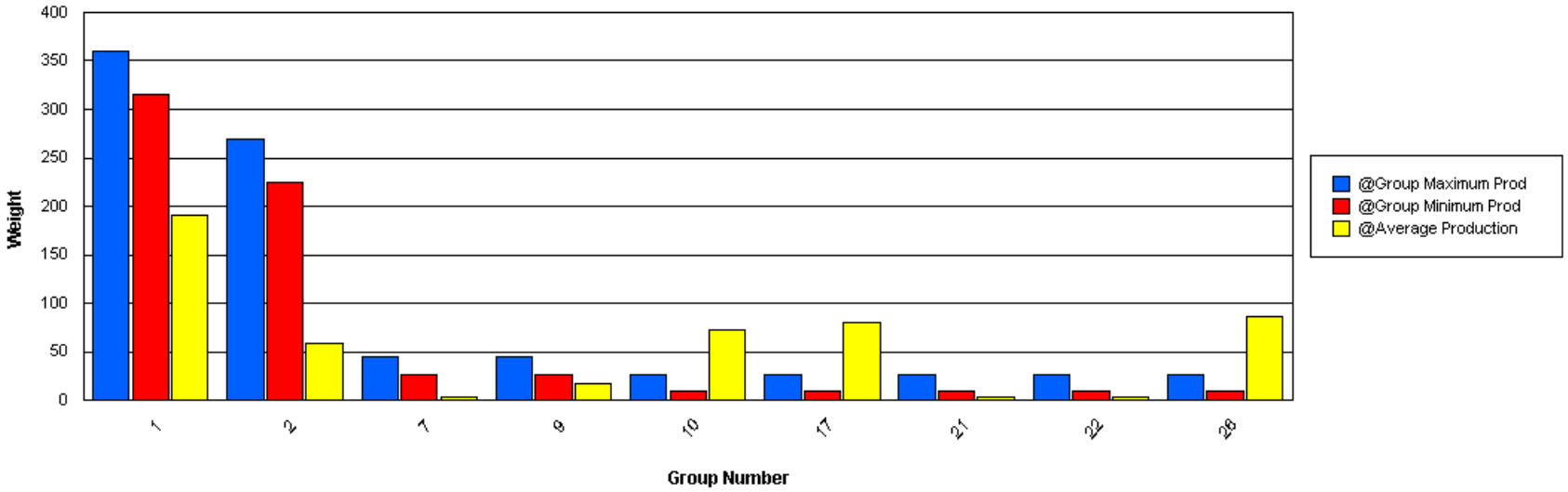
Functional / Structural Groups

Report Parameters

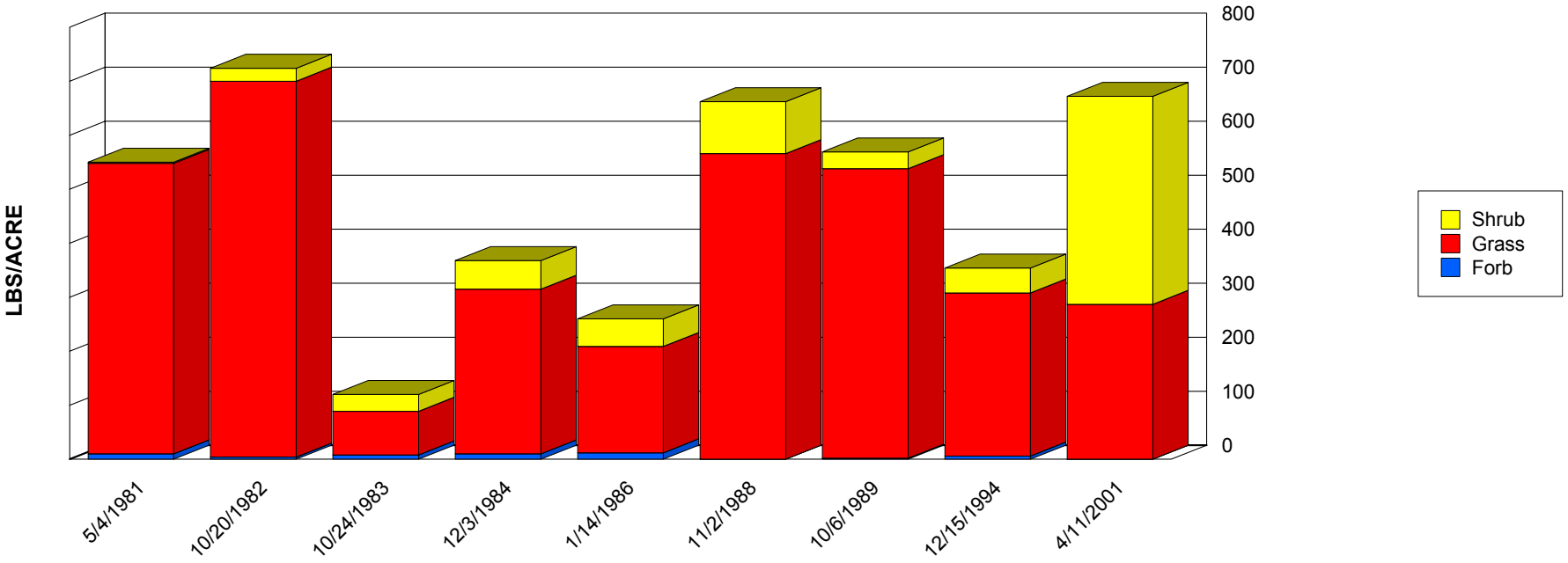
SITE NAME LIKE	65036-FRAZIER LO-SW-D087
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2002
MIN LBS TO GRAPH	3
SELECTED ECOSITE	042CY007NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
1	Grass	HIMU2	315	360	0.00	429.00	121.56	153.61
1	Grass	SCBR2	315	360	2.00	137.00	70.00	55.80
2	Grass	BOER4	225	270	0.00	69.00	18.78	20.37
2	Grass	BOGR2	225	270	11.00	104.00	39.56	28.11
6	Grass	SPAI	27	45	0.00	12.00	2.00	4.47
7	Grass	ARIST	27	45	0.00	3.00	0.43	1.05
7	Grass	SPCR	27	45	0.00	7.00	2.88	2.26
9	Grass	MUAR	27	45	0.00	32.00	12.13	14.23
9	Grass	MUAR2	27	45	0.00	11.00	4.63	4.12
10	Grass	BOBR	9	27	0.00	188.00	71.86	65.17
14	Grass	TRMU	9	27	0.00	10.00	2.75	4.21
17	Grass	ERPU8	9	27	0.00	25.00	5.88	7.66
17	Grass	MUTO2	9	27	0.00	11.00	5.50	5.50
17	Grass	SPFL2	9	27	0.00	7.00	1.40	2.80
17	Grass	SPNE	9	27	0.00	222.00	67.57	88.97
19	Forb	PENA	9	27	0.00	2.00	0.50	0.87
19	Forb	PHACE	9	27	0.00	2.00	1.00	1.00
21	Forb	LEMO2	9	27	0.00	4.00	2.00	2.00
21	Forb	LEPID	9	27	0.00	6.00	1.00	2.24
22	Forb	AAFF	9	27	0.00	10.00	2.89	3.54
22	Forb	PEPA2	9	27	0.00	6.00	1.00	2.24
24	Forb	EUPHO	9	27	0.00	1.00	0.50	0.50
24	Forb	MELE2	9	27	0.00	2.00	0.29	0.70
24	Forb	TAAU	9	27	0.00	1.00	0.50	0.50
26	Shrub	GUSA2	9	27	2.00	72.00	31.11	21.79
26	Shrub	OPUNT	9	27	0.00	380.00	54.88	123.16

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV



Production Lbs/Acre Trends

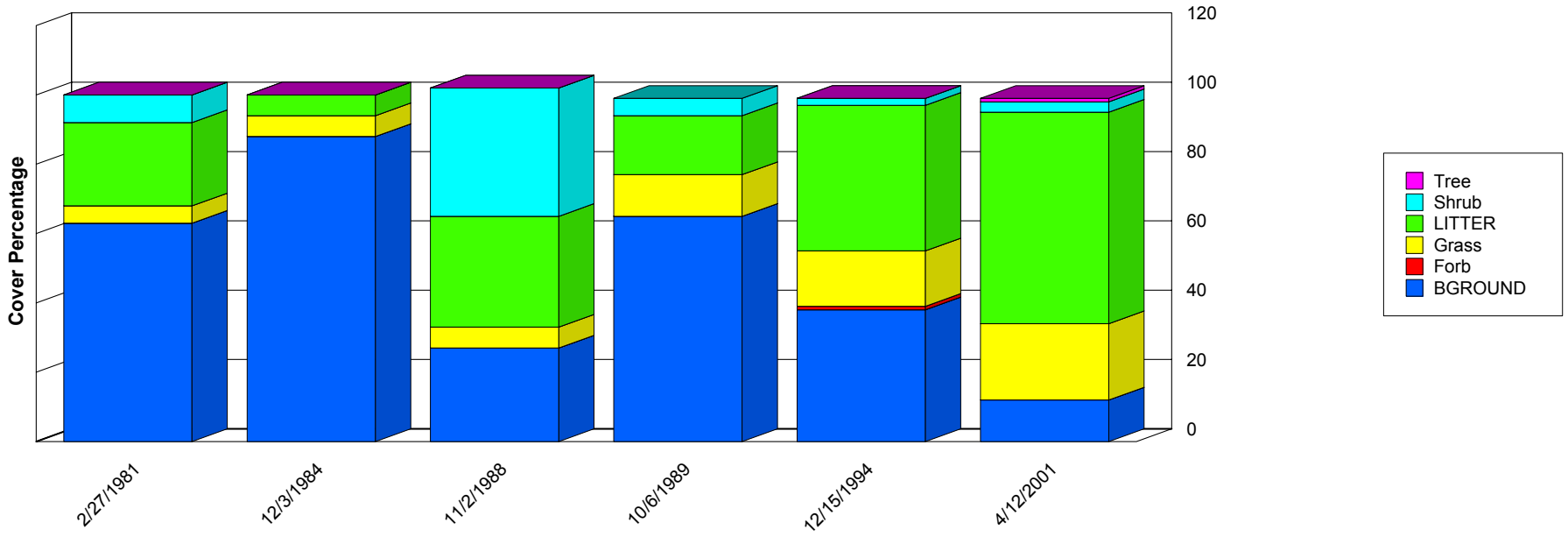


	5/4/1981	10/20/1982	10/24/1983	12/3/1984	1/14/1986	11/2/1988	10/6/1989	12/15/1994	4/11/2001
Forb	**10.00**	**4.00**	**8.00**	**10.00**	**12.00**	**0.00**	**2.00**	**6.00**	**0.00**
Grass	**538.00**	**696.00**	**81.00**	**305.00**	**197.00**	**566.00**	**536.00**	**302.00**	**287.00**
Shrub	**2.00**	**24.00**	**31.00**	**53.00**	**51.00**	**96.00**	**31.00**	**46.00**	**385.00**
Total	**550.00**	**724.00**	**120.00**	**368.00**	**260.00**	**662.00**	**569.00**	**354.00**	**672.00**

Report Parameters

SITE NAME LIKE	65036-FRAZIER LO-SW-D087
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2002

Ground Cover Trends



	2/27/1981	12/3/1984	11/2/1988	10/6/1989	12/15/1994	4/12/2001
BGROUND	63.00	88.00	27.00	65.00	38.00	12.00
Forb	0.00	0.00	0.00	0.00	1.00	0.00
Grass	5.00	6.00	6.00	12.00	16.00	22.00
LITTER	24.00	6.00	32.00	17.00	42.00	61.00
Shrub	8.00	0.00	37.00	5.00	2.00	3.00
Tree	0.00	0.00	0.00	0.00	0.00	1.00
Total	100.00	100.00	102.00	99.00	99.00	99.00

Report Parameters

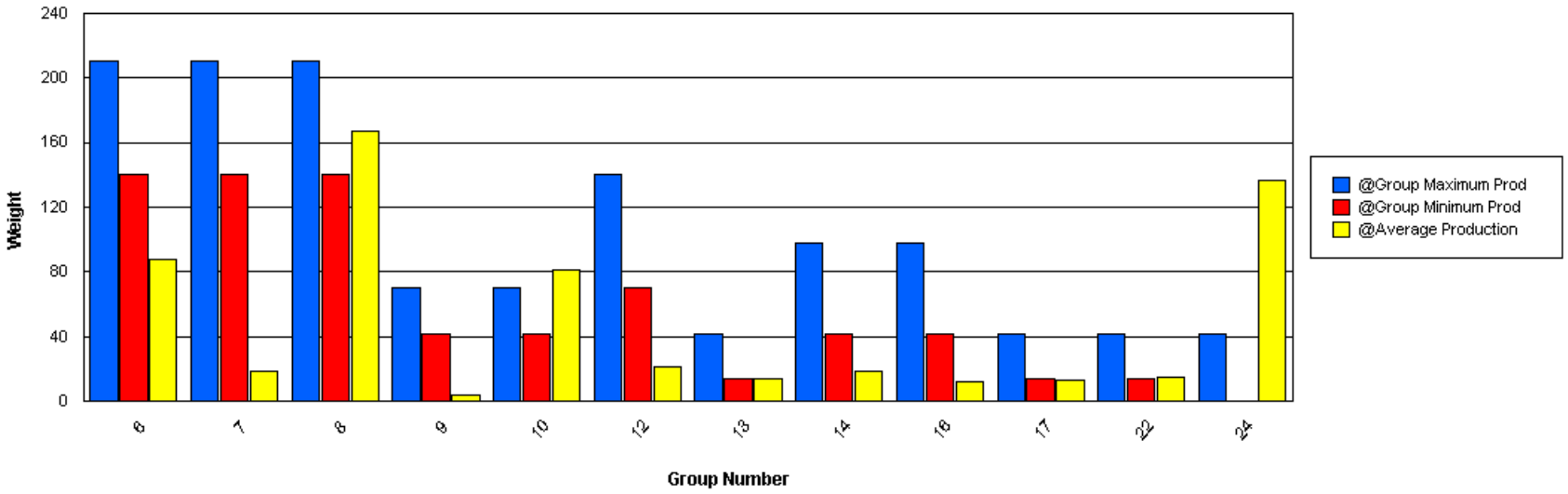
SITE NAME LIKE	65036-REGISTERED-D085
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2002

Functional / Structural Groups

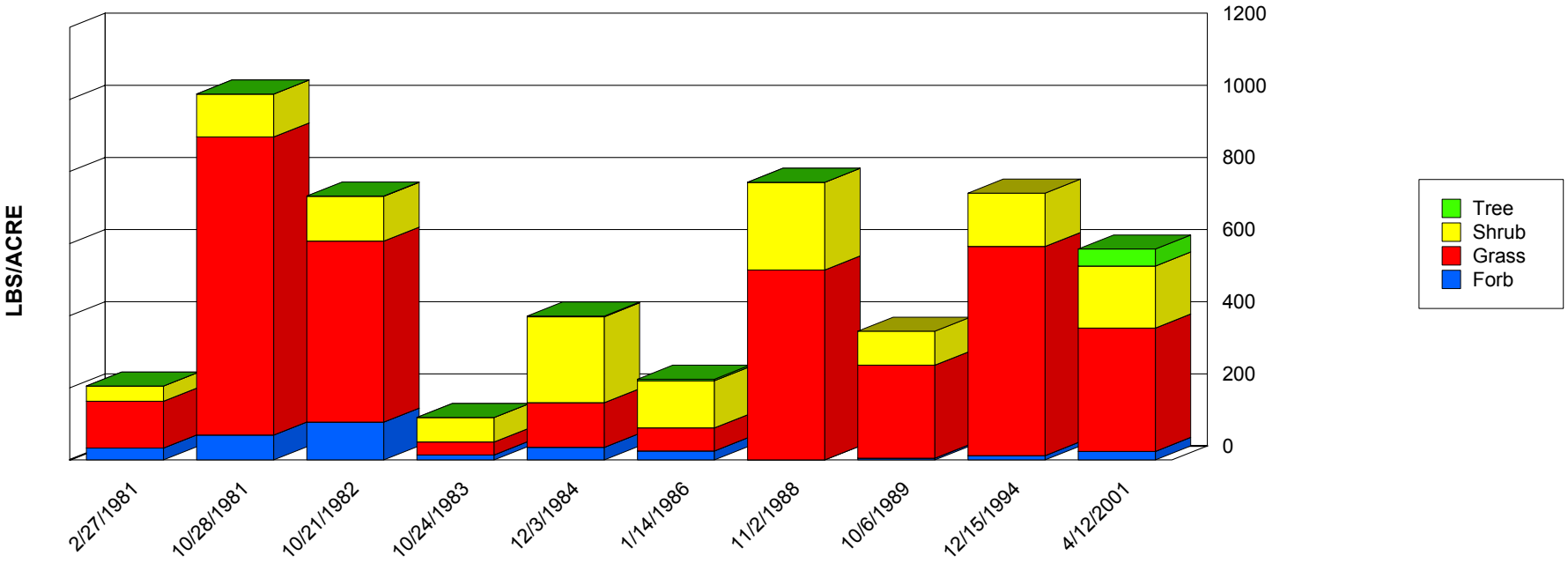
Report Parameters	
SITE NAME LIKE	65036-REGISTERED-D085
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2002
MIN LBS TO GRAPH	3
SELECTED ECOSITE	042CY003NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
6	Grass	BOER4	140	210	16.00	22.00	19.00	3.00
6	Grass	MUPO2	140	210	0.00	185.00	68.40	62.55
7	Grass	SEMA5	140	210	0.00	68.00	18.75	26.35
8	Grass	SPCO4	140	210	0.00	105.00	22.50	37.61
8	Grass	SPCR	140	210	0.00	326.00	112.80	94.97
8	Grass	SPFL2	140	210	0.00	185.00	32.00	59.72
9	Grass	CHCU2	42	70	0.00	14.00	3.67	5.09
10	Grass	ARIST	42	70	0.00	225.00	81.30	69.09
12	Grass	AAGG	70	140	0.00	15.00	3.00	6.00
12	Grass	BOBA2	70	140	0.00	3.00	1.00	1.41
12	Grass	CEPA7	70	140	0.00	50.00	16.67	23.57
12	Grass	ERCI	70	140	0.00	1.00	0.50	0.50
13	Grass	BOBA3	14	42	0.00	2.00	0.33	0.75
13	Grass	BOGR2	14	42	0.00	13.00	5.80	5.42
13	Grass	CHLOR	14	42	0.00	2.00	0.29	0.70
13	Grass	ERPU8	14	42	0.00	16.00	2.57	5.53
13	Grass	MUAR2	14	42	0.00	8.00	1.50	2.93
13	Grass	PAOB	14	42	0.00	7.00	2.00	2.92
13	Grass	PARA2	14	42	0.00	7.00	0.88	2.32
13	Grass	TRPI2	14	42	0.00	2.00	1.00	1.00
14	Forb	CROTO	42	98	0.00	60.00	15.67	17.78
14	Forb	CRPO5	42	98	0.00	15.00	2.75	5.17
14	Forb	MELE2	42	98	0.00	3.00	0.50	1.00
16	Forb	AAFF	42	98	0.00	22.00	6.40	8.13
16	Forb	ERIOG	42	98	0.00	14.00	4.67	6.60
16	Forb	LESQU	42	98	0.00	3.00	1.00	1.41

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
17	Forb	LEFE	14	42	0.00	24.00	3.25	7.87
17	Forb	LEMO2	14	42	0.00	7.00	1.00	2.29
17	Forb	MEST3	14	42	0.00	21.00	5.25	9.09
17	Forb	PPFF	14	42	0.00	7.00	2.00	2.52
17	Forb	SOEL	14	42	0.00	6.00	2.00	2.83
22	Shrub	YUCCA	14	42	6.00	10.00	8.00	2.00
22	Tree	YUEL	14	42	0.00	47.00	6.75	15.27
24	Shrub	GUSA2	0	42	2.00	243.00	66.10	81.91
24	Shrub	PRGL2	0	42	0.00	168.00	70.20	49.28



Production Lbs/Acre Trends

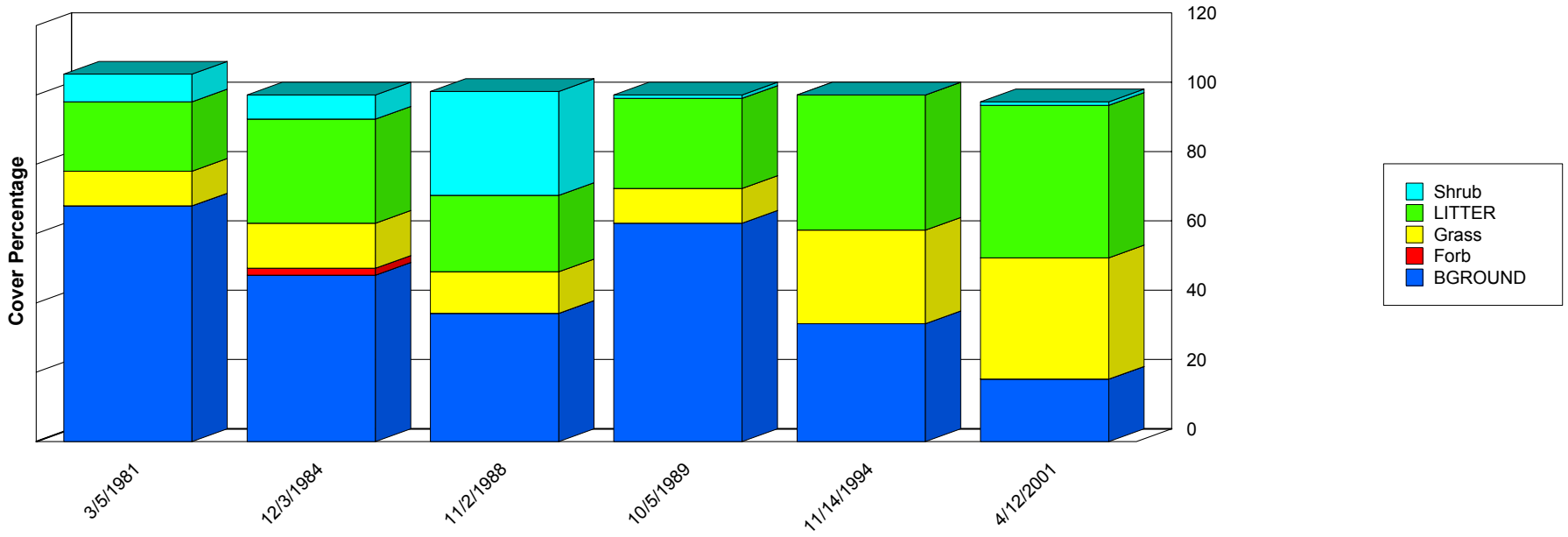


	2/27/1981	10/28/1981	10/21/1982	10/24/1983	12/3/1984	1/14/1986	11/2/1988	10/6/1989	12/15/1994	4/12/2001
Forb	**33.00**	**69.00**	**105.00**	**14.00**	**35.00**	**25.00**	**0.00**	**5.00**	**12.00**	**24.00**
Grass	**130.00**	**827.00**	**502.00**	**36.00**	**124.00**	**64.00**	**527.00**	**258.00**	**580.00**	**342.00**
Shrub	**42.00**	**119.00**	**124.00**	**68.00**	**238.00**	**131.00**	**243.00**	**94.00**	**148.00**	**172.00**
Tree	**0.00**	**0.00**	**1.00**	**0.00**	**2.00**	**4.00**	**0.00**	**0.00**	**0.00**	**47.00**
Total	**205.00**	**1,015.00**	**732.00**	**118.00**	**399.00**	**224.00**	**770.00**	**357.00**	**740.00**	**585.00**

Report Parameters

SITE NAME LIKE	65036-REGISTERED-D085
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2002

Ground Cover Trends



	3/5/1981	12/3/1984	11/2/1988	10/5/1989	11/14/1994	4/12/2001
BGROUND	68.00	48.00	37.00	63.00	34.00	18.00
Forb	0.00	2.00	0.00	0.00	0.00	0.00
Grass	10.00	13.00	12.00	10.00	27.00	35.00
LITTER	20.00	30.00	22.00	26.00	39.00	44.00
Shrub	8.00	7.00	30.00	1.00	0.00	1.00
Total	106.00	100.00	101.00	100.00	100.00	98.00

Report Parameters

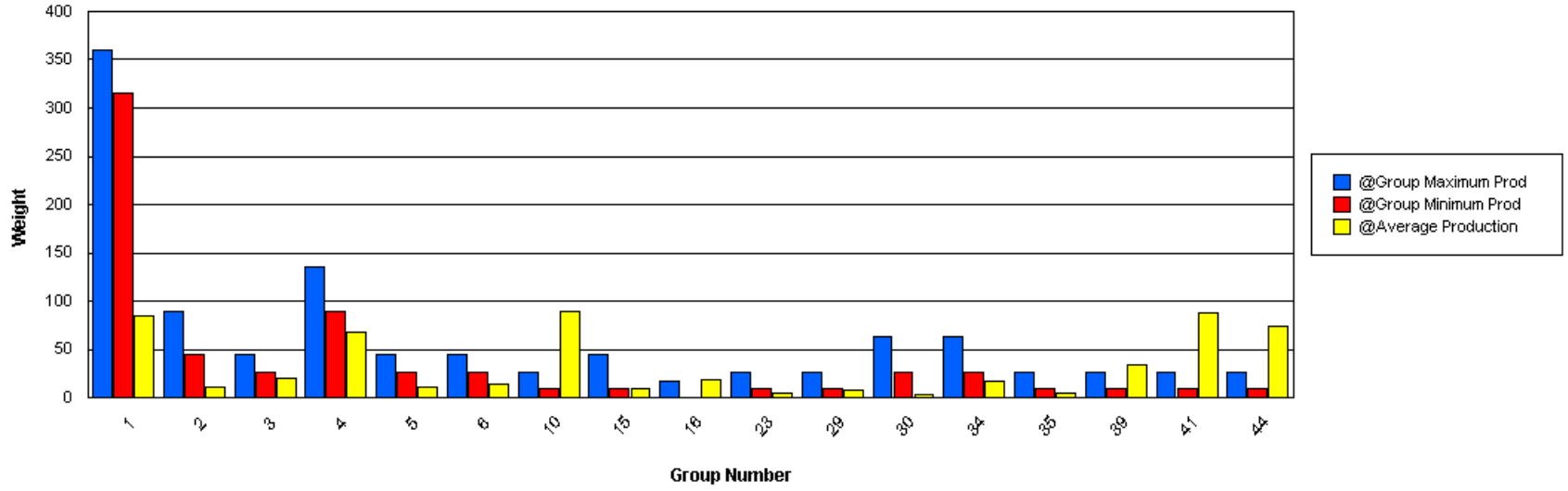
SITE NAME LIKE	65036-RIVER NW #1-D084
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2002

Functional / Structural Groups

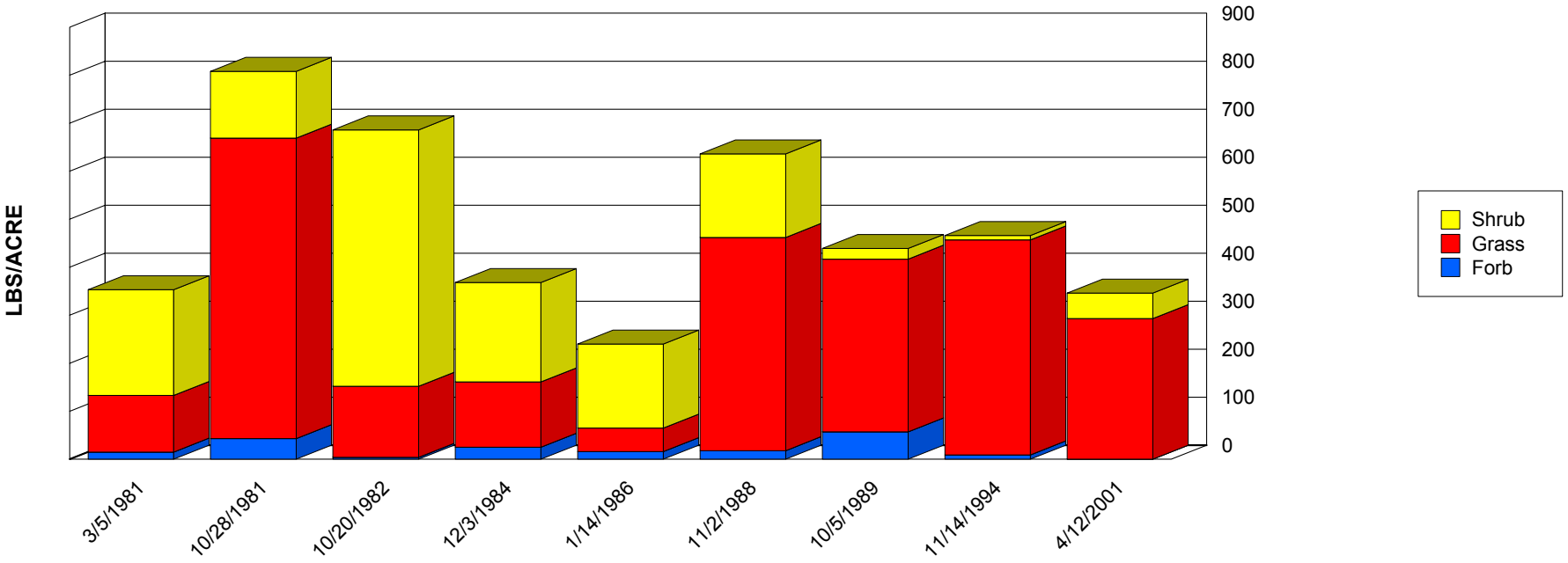
Report Parameters	
SITE NAME LIKE	65036-RIVER NW #1-D084
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2002
MIN LBS TO GRAPH	3
SELECTED ECOSITE	042CY004NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
1	Grass	BOER4	315	360	16.00	215.00	84.56	69.49
2	Grass	BOGR2	45	90	0.00	33.00	10.44	9.63
3	Grass	MUPO2	27	45	0.00	58.00	19.63	18.99
4	Grass	SPCO4	90	135	0.00	42.00	13.00	15.47
4	Grass	SPCR	90	135	2.00	153.00	55.56	56.84
5	Grass	ARIST	27	45	0.00	48.00	11.56	15.05
6	Grass	SEMA5	27	45	0.00	58.00	13.50	18.05
9	Grass	PAOB	9	27	1.00	2.00	1.50	0.50
10	Grass	HIJA	9	27	0.00	143.00	43.75	58.77
10	Grass	HIMU2	9	27	0.00	120.00	45.89	42.39
15	Grass	AAGG	9	45	2.00	14.00	8.00	6.00
15	Grass	BOAR	9	45	0.00	6.00	1.50	2.60
15	Grass	BOBA2	9	45	0.00	1.00	0.33	0.47
16	Grass	BOBR	0	18	9.00	33.00	18.67	10.34
23	Grass	MUAR2	9	27	0.00	23.00	5.33	7.42
26	Grass	SCBR2	9	27	0.00	10.00	2.38	3.67
29	Grass	ERPU8	9	27	0.00	27.00	7.22	10.37
29	Grass	PANIC	9	27	0.00	1.00	0.33	0.47
30	Forb	CROTO	27	63	0.00	8.00	2.14	2.70
30	Forb	MELE2	27	63	0.00	6.00	1.00	2.24
32	Forb	LEFE	27	63	0.00	12.00	2.57	4.37
34	Forb	AAFF	27	63	0.00	52.00	9.56	16.38
34	Forb	DYPE	27	63	0.00	10.00	1.83	3.67
34	Forb	PEPA2	27	63	0.00	21.00	5.25	9.09
35	Forb	LEPID	9	27	0.00	10.00	2.83	4.10
35	Forb	PENA	9	27	0.00	3.00	1.40	1.02

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
35	Forb	SOEL	9	27	0.00	2.00	0.80	0.75
39	Shrub	ATCA2	9	27	0.00	181.00	33.56	54.38
41	Shrub	GUSA2	9	27	0.00	174.00	88.13	68.31
44	Shrub	PRGL2	9	27	0.00	251.00	74.86	96.31



Production Lbs/Acre Trends

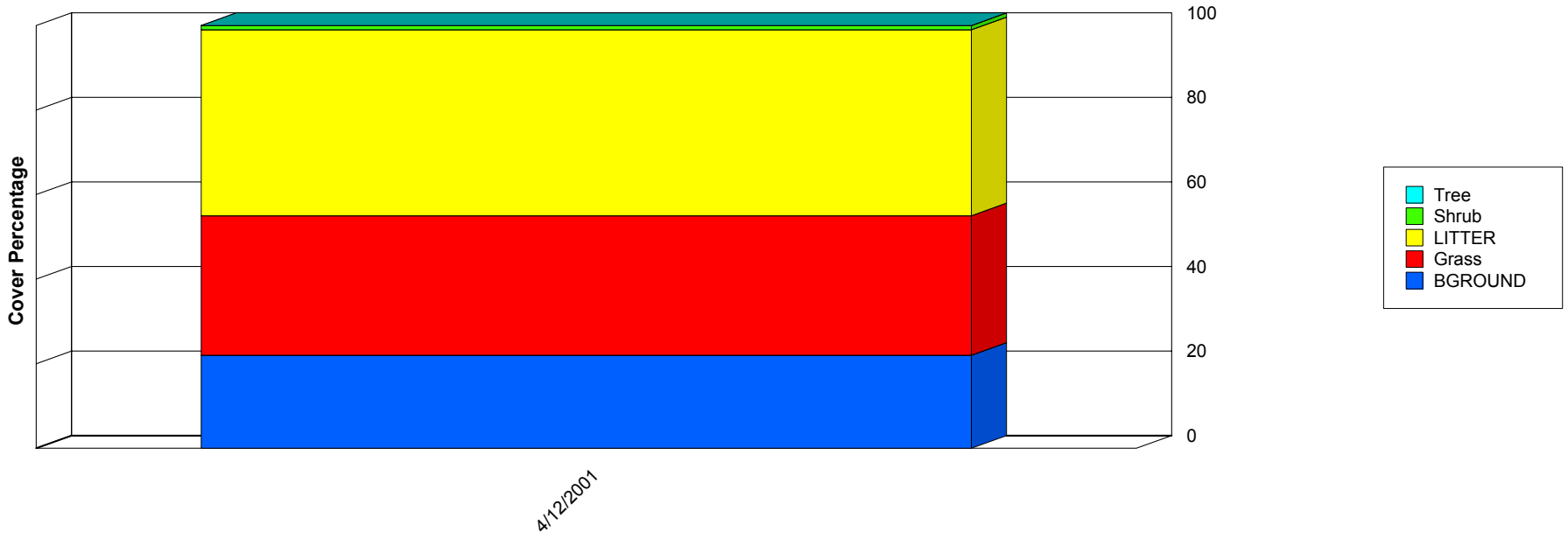


	3/5/1981	10/28/1981	10/20/1982	12/3/1984	1/14/1986	11/2/1988	10/5/1989	11/14/1994	4/12/2001
Forb	**15.00**	**43.00**	**4.00**	**25.00**	**16.00**	**18.00**	**57.00**	**9.00**	**0.00**
Grass	**118.00**	**626.00**	**148.00**	**136.00**	**49.00**	**444.00**	**360.00**	**448.00**	**293.00**
Shrub	**220.00**	**139.00**	**534.00**	**207.00**	**175.00**	**174.00**	**22.00**	**9.00**	**53.00**
Total	**353.00**	**808.00**	**686.00**	**368.00**	**240.00**	**636.00**	**439.00**	**466.00**	**346.00**

Report Parameters

SITE NAME LIKE	65036-RIVER NW #1-D084
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2002

Ground Cover Trends



	4/12/2001
BGROUND	22.00
Grass	33.00
LITTER	44.00
Shrub	1.00
Tree	0.00
Total	100.00

Report Parameters

SITE NAME LIKE	65036-RIVER NW #2-N006
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2002

Production Lbs/Acre Trends

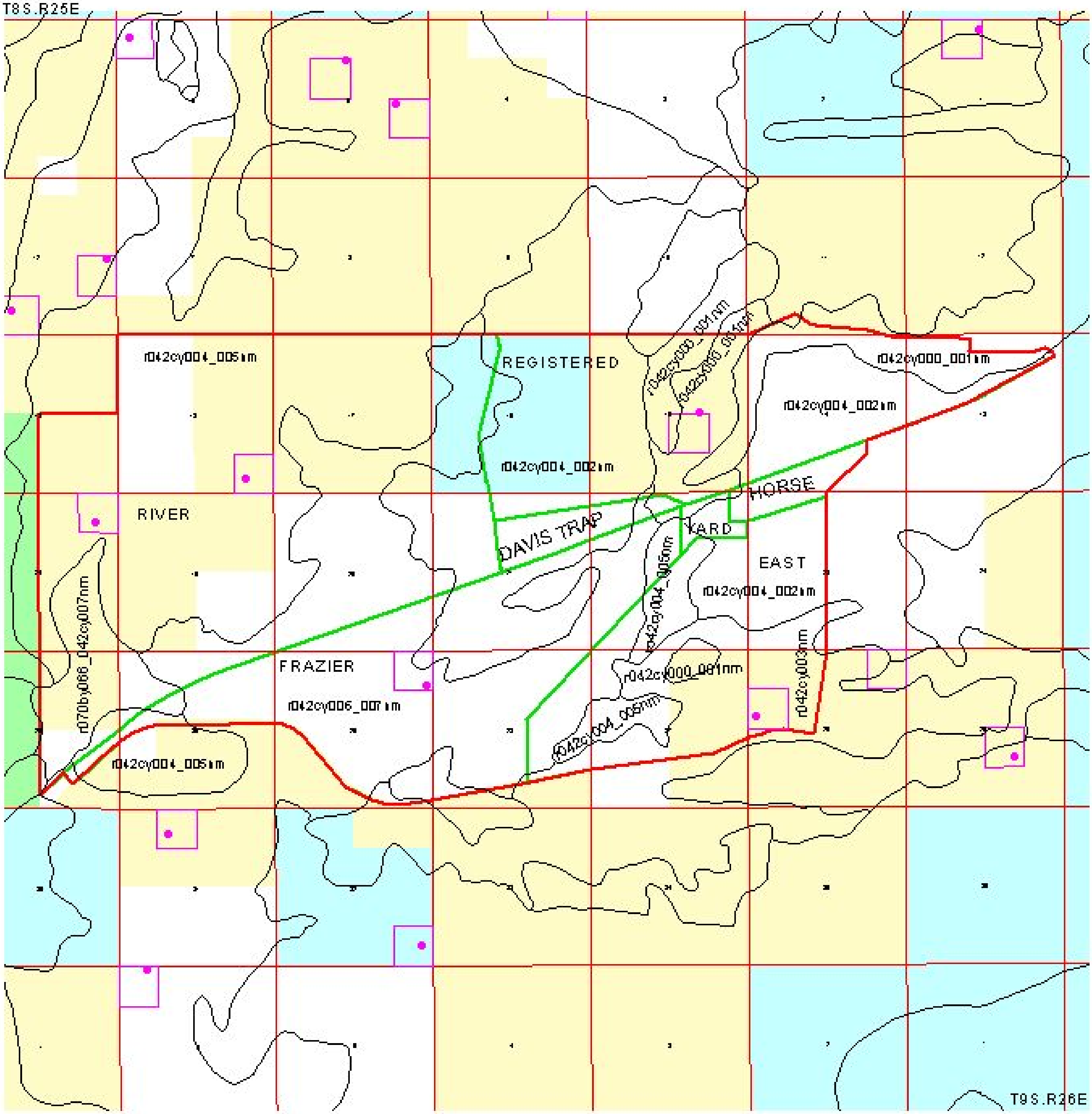
	4/12/2001
Forb	**4.00**
Grass	**355.00**
Shrub	**309.00**
Total	**668.00**

Report Parameters

SITE NAME LIKE	65036-RIVER NW #2-N006
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2002

Rangeland Health Assessment
Ecological Sites

Allotment 65036



0.75 0 0.75 1.5 Miles

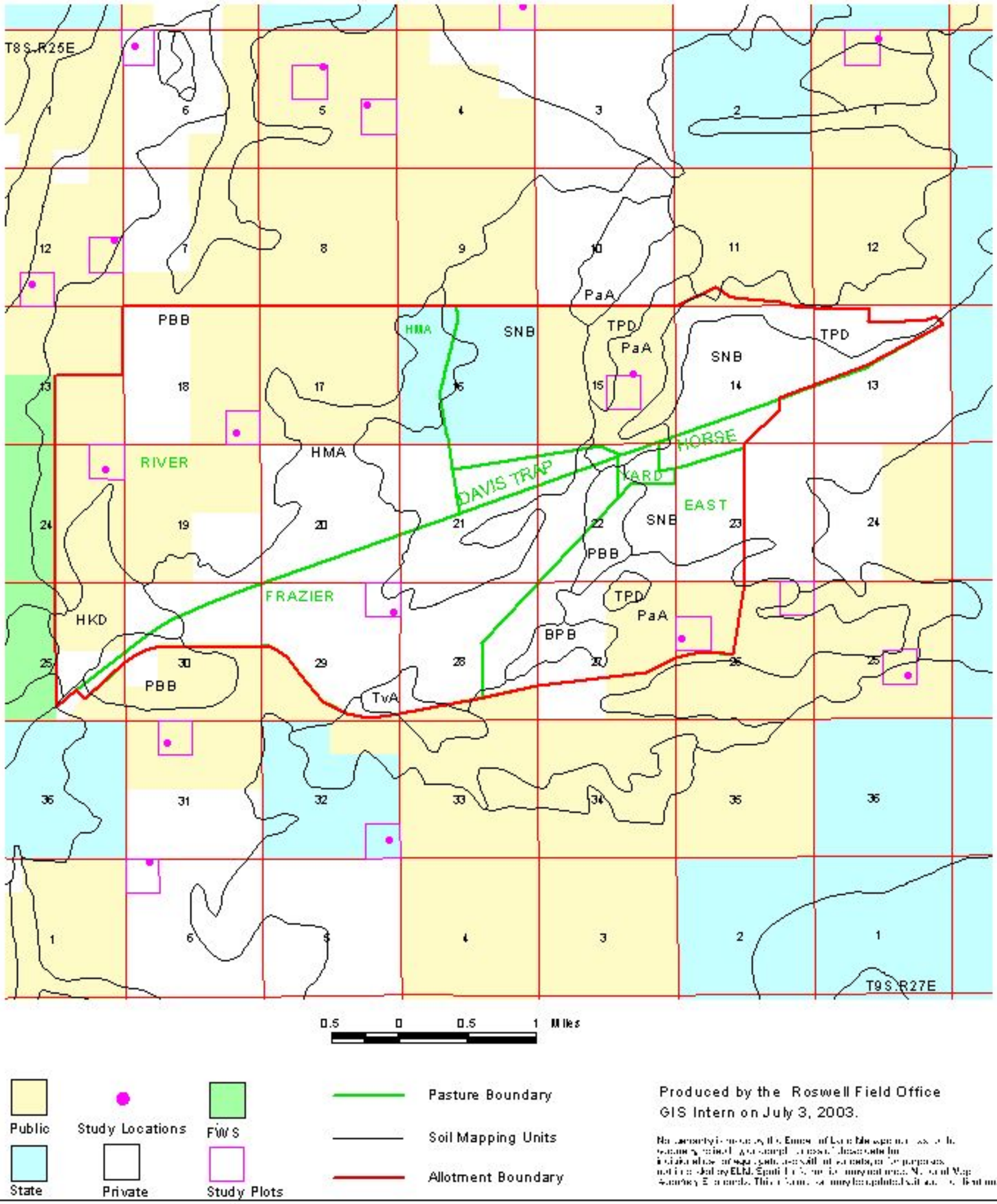
Public
Study Locations
FWS
State
Private
Study Plots

Pasture Boundary
Ecological Site Boundary
Allotment Boundary

Produced by the Roswell Field Office
GIS Intern on July 2, 2003.

Rangeland Health Assessment
Soil Mapping Units

Allotment 65036



Produced by the Roswell Field Office
GIS Intern on July 3, 2003.